

KCC 4782 (K-C 17,029)  
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REMARKS

Claims 1, 9, 12, and 18 have been amended and claims 7 and 17 have been canceled herein in this Amendment D. Support for the amendments to claims 1 and 12 can be found in original claims 7 and 17 and the instant specification on page 9, lines 1-15. After entry of this Amendment D, claims 1, 3-6, 9-16, 18-20, and 26-41 will be pending in this case. Applicants note that claims 26-41 have been found to be in condition for allowance. Applicants respectfully request reconsideration and allowance of all pending claims.

1. Rejection of Claims 1 and 12 Under 35 U.S.C. §102(e)

Reconsideration is requested of the rejection of claims 1 and 12 under 35 U.S.C. §102(e) as being anticipated by Radwanski et al. (U.S. 6,190,735).

Claim 1, as amended herein, is directed to a process for manufacturing a cellulosic paper product. The process comprises: forming an aqueous suspension of papermaking fibers; introducing sodium bicarbonate into said aqueous suspension; depositing said aqueous suspension onto a sheet-forming fabric to form a wet web; and through-drying said wet web by passing heated air through said wet web. The temperature of the heated air is at least about 190°C.

Radwanski et al. disclose a process for treating a fibrous material comprising: providing a liquid suspension composed of fibrous material; intermixing the liquid suspension of fibrous material with a treatment over a time period  $T_1$ ; depositing the liquid suspension of fibrous material and intermixed treatment

KCC 4782 (K-C 17,029)  
PATENT

onto a forming surface to form a layer and removing a substantial portion of the liquid over a period of time  $T_2$ ; and applying pressurized jets of a liquid to the layer of fibrous material to wash unused treatment from the fibrous material within a period of time  $T_3$ . In one preferred embodiment, the fibrous material is treated with reactive dyes. During treatment with the reactive dyes, the pH of the liquid suspension of fibers and dye is raised to alkali levels to enhance reactivity between the dye and fibers. One preferred alkali material for raising the pH is sodium bicarbonate.<sup>1</sup> Optionally, subsequent to the treatment process, the treated and washed material may be dried. Numerous generic drying processes including through-air drying, can drying, infra-red radiation, Yankee dryers, vacuum de-watering, microwaves, and ultrasonic energy are disclosed.

Significantly, Radwanski et al. fail to disclose through-air drying by passing heated air having a temperature of at least about 190°C through the material. This is a significant requirement of claim 1 and is a significant aspect of Applicants' invention as described in Applicants' specification.

As stated in M.P.E.P. §2131, a claim is anticipated only if each and every element of the claim is described in the prior art reference. As noted above, no where in Radwanski et al. is it disclosed to use heated air having a temperature of at least about 190°C to dry the material as required in the process of amended claim 1. More specifically, no where in Radwanski et al. is any temperature disclosed for through-drying the material. As Radwanski et al. fail to disclose through-drying a

<sup>1</sup> Radwanski et al. at column 12, lines 25-51.

KCC 4782 (K-C 17,029)  
PATENT

treated and washed material using heated air having a temperature of at least about 190°C, Radwanski et al. fail to disclose each and every element of amended claim 1. As such, amended claim 1 is novel and patentable over the Radwanski et al. reference.

Amended claim 12 is similar to amended claim 1 and further requires the sodium bicarbonate to be introduced into the aqueous suspension prior to depositing the aqueous suspension onto the sheet-forming fabric. As such, claim 12 is patentable for the same reasons as claim 1 set forth above, as well as for the additional elements it requires.

2. Rejection of Claims 3-4, 11, and 13-14 Under 35 U.S.C. §103(a)

Reconsideration is requested of the rejection of claims 3-4, 11, and 13-14 under 35 U.S.C. §103(a) as being unpatentable over Radwanski et al. in view of Taylor (U.S. 2,935,437).

Claims 3-4 and 11 depend from claim 1, which is discussed above. Specifically, claims 3-4 further limit the pH of the aqueous suspension after the sodium bicarbonate is introduced. Claim 11 further requires the papermaking fibers to predominantly comprise secondary cellulosic fibers. Furthermore, claims 13-14 depend from claim 12 and further limit the pH of the aqueous suspension after the sodium bicarbonate is introduced. Claims 1 and 12, as amended herein, are patentable for the reasons set forth above. In particular, the Radwanski et al. reference fails to disclose through-drying a wet web by passing heated air having a temperature of at least about 190°C through the web.

KCC 4782 (K-C 17,029)  
PATENT

Additionally, as noted by the Office, the Radwanski et al. reference fails to teach or suggest an aqueous suspension pH after the addition of sodium bicarbonate within the ranges claimed in claims 3-4 and 13-14 or the secondary cellulosic fibers as required in claim 11. In an attempt to find each and every element of claims 3-4, 11, and 13-14 as required by the M.P.E.P. for a determination of *prima facie* obviousness, the Office cites Taylor for combination with Radwanski et al.

Taylor discloses a process for making a pigment-filled paper of high brightness and opacity while reducing the losses of pigment in the papermaking machine. An aqueous suspension of slurry of papermaking fibers is formed to which is added finely divided hydrated amorphous calcium silicate while maintaining the pH of the slurry of from 4 to 9.2 by addition of an acidic material. Acid salts such as sodium bicarbonate are included among the many disclosed acidic materials. The acidic material is said to react and form a water insoluble salt of the calcium silicate which precipitates and adheres firmly to the papermaking machine. After precipitation of the calcium silicate on the cellulosic fiber surfaces, the slurry is sheeted into paper on the wire of a papermaking machine. The web is couched from the wire and subsequently dried, calendered and optionally coated according to convention procedures.<sup>2</sup>

In order for the Office to show a *prima facie* case of obviousness, M.P.E.P. §2143 requires that the Office must meet three criteria: (1) the prior art references must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the references themselves or

KCC 4782 (K-C 17,029)  
PATENT

in the knowledge generally available to one of ordinary skill in the art, to combine the references, and (3) there must be some reasonable expectation of success. The Office has clearly failed to meet its burden under number (1) above, as the cited references, alone or in combination, have not taught or suggested all of the claimed limitations of Applicants' claims 3-4, 11, and 13-14.

As noted above, Radwanski et al. fail to teach or suggest each and every limitation of claims 1 and 12, from which claims 3-4, 11, and 13-14 directly or indirectly depend. Specifically, no where in the Radwanski et al. reference is it taught or suggested to use heated air having a temperature of at least about 190°C to through-dry a wet web as required in claims 1 and 12.

The Taylor reference fails to overcome the above shortcoming. While the Taylor reference does disclose drying a web material, no where does the Taylor reference teach or suggest through-drying a web material by passing heated air at a temperature of at least about 190°C through the material. As such, neither of the cited references disclose through-drying a wet web by passing heated air having a temperature of at least about 190°C through the wet web as required in claims 1 and 12. As such, neither of the cited references discloses each and every limitation required by claims 3-4, 11, and 13-14, which directly or indirectly depend on claim 1 or claim 12.

As the cited references fail to teach or suggest each and every limitation of claims 1 and 12 and of claims 3-4, 11, and

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<sup>2</sup> See Taylor at col. 4, lines 48-59.

KCC 4782 (K-C 17,029)  
PATENT

13-14, which depend on claims 1 and 12, claims 3-4, 11, and 13-14 cannot be said to be obvious in view of the cited references.

3. Rejection of Claims 7, 9-10, and 17-20 Under 35 U.S.C. §103(a)

Reconsideration is requested of the rejection of claims 7, 9-10, and 17-20 under 35 U.S.C. §103(a) as being unpatentable over Radwanski et al. in view of Taylor, and further in view of Sisson (U.S. 3,303,576).

Claims 7 and 17 have been canceled, and, as such, the rejection of claims 7 and 17 should be withdrawn as moot. Claims 9-10 depend from claim 1, which is discussed above. Specifically, claims 9-10 further limit the temperature of the heated air for through-drying the wet web. Likewise, claims 18-19 depend from claim 12 and further limit the temperature of the heated air. Furthermore, claim 20 depends from claim 12 and further requires the papermaking fibers to predominately comprise secondary cellulosic fibers. Claims 1 and 12, as amended herein, are patentable for the reasons set forth above. In particular, the Radwanski et al. and Taylor references fail to disclose through-drying a wet web by passing heated air having a temperature of at least about 190°C through the web.

Sisson discloses a two-stage apparatus for drying porous paper or tissue at very high throughput rates. During the first stage, the drying apparatus comprises an air supply means for providing a moving stream of low pressure drying air. This source of a moving stream of drying air at a pressure slightly above that of the air surrounding the major portion is connected to an air inlet duct or plenum located intermediate the web

KCC 4782 (K-C 17,029)  
PATENT

infeed and web outfeed stations. The inlet duct directs the moving stream of drying air into the roll through substantially the length of the uncovered full length minor portion of the roll periphery in a substantially radial direction so that a uniform flow path is established for the drying air. The air moving into the inlet plenum has a temperature of approximately 450-500°F (232.2-260°C). During the second stage of drying, the only temperatures given for drying the web is if the web is to be dried to a consistency of about 80%, at the same speed and utilizing a roll diameter as described in connection with the first stage. Specifically, the temperature of the air at inlet plenum in the second stage should be approximately 250-350°F (121.1-176.7°C). Sisson does not disclose the use of sodium bicarbonate in the papermaking process.

In an attempt to remedy the shortcomings of each reference alone, the Office combines these references together and states that it would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of these references, because such a combination would provide for heating in the range claimed and thus improve drying of the web of Radwanski et al. and Taylor as disclosed by Sisson.

As noted above, in order for the Office to show a *prima facie* case of obviousness, there must be some suggestion or motivation to combine the reference teachings. The teaching or suggestion to make the combination must be found in the prior art, not in Applicants' disclosure. Additionally, as noted in M.P.E.P. §2143.01, the mere fact that references can be combined or modified does not render the resultant combination obvious

KCC 4782 (K-C 17,029)  
PATENT

unless the prior art also suggests the desirability of the combination.

Undoubtedly, Radwanski et al. and Taylor both disclose the introduction of sodium bicarbonate into a suspension of fibers, and furthermore, Radwanski et al. disclose through-air drying processes as one suitable form of drying the web material. Furthermore, Sisson discloses air drying. Applicants assert, however, there is no reason one skilled in the art would combine these teachings without using Applicants' disclosure as a blueprint. Specifically, why would one skilled in the art have been motivated to choose, for combination with sodium bicarbonate, the air drying method using heated air at temperatures as disclosed in Sisson, when Sisson fails to disclose sodium bicarbonate, over many various other through-drying methods commonly known in the art? They would not as there is simply no motivation or suggestion to do so.

With all due respect, it appears that the Office has used impermissible hindsight analysis and reconstruction when combining the Radwanski et al. and Taylor references with the Sisson reference.<sup>3</sup> Notably, it would be clear to one skilled in

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<sup>3</sup> M.P.E.P. §2142 provides that in order to reach a proper determination under 35 U.S.C. §103(a), the Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. Knowledge of Applicants' disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences." The tendency to resort to "hindsight" based upon Applicants' disclosure is often difficult to avoid due to the very nature of the examination process. However, as stated by the Federal Circuit, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned



KCC 4782 (K-C 17,029)  
PATENT

the art reading Radwanski et al. that through-drying can be used to dry a wet web. There are, however, a myriad of through-drying methods, many of which are used to dry wet webs. What is important is that there is no motivation or suggestion to use the through air-drying method of Sisson, which fails to disclose using sodium bicarbonate in a suspension of papermaking fibers, over any of the other enormous number of through-drying methods described in the art.

Because there is no motivation or suggestion to combine the references cited by the Office, claims 1 and 12 are patentable. As such, claims 9-10, which depend on claim 1 are patentable for the same reasons as claim 1 set forth above, as well as for the additional elements they require. Additionally, claims 18-20, which depend on claim 12 are patentable for the same reasons as claim 12 set forth above, as well as for the additional elements they require.

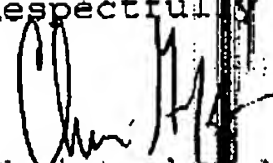
In view of the above, Applicants respectfully request allowance of all pending claims. The Commissioner is hereby authorized to charge any fee deficiency in connection with this Amendment D to Deposit Account Number 19-1345 in the name of Senniger, Powers, Leavitt & Roedel.

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from the prior art. Grain Processing Corp. v. American-Maize-Products, Co., 840 F.2d 902, 904 (Fed. Cir. 1988).

KCC 4782 (K-C 17,029)  
PATENT

Respectfully Submitted,

  
Christopher M. Goff, Reg. No. 41,785  
SENNIGER POWERS  
One Metropolitan Square, 16<sup>th</sup> Floor  
St. Louis, Missouri 63102  
314-231-5400

CMG/JMB/dhm  
Via Facsimile (571) 273-8300

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